

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Yuji YAMAMOTO et al.

Serial No. To be assigned

Group Art Unit: To be assigned

Confirmation No.

Filed: January 25, 2002

Examiner: To be assigned

(Divisional of Serial No. 09/236,484 filed January 25, 1999)

For: PHOTOGRAPH PRINTING DEVICE, ELECTRONIC IMAGE INPUT DEVICE, FILM
SCANNER, SCRATCH RECOGNITION METHOD, MEMORY MEDIUM RECORDING
SCRATCH RECOGNITION PROGRAM, AND IMAGE RESTORATION METHOD

SECOND PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Before examination of the above-identified application, please amend the application as follows:

IN THE ABSTRACT:

Please DELETE the Abstract in its entirety and substitute the attached new Abstract.

IN THE SPECIFICATION:

Please AMEND the paragraph beginning at page 36 line 7, as follows:

When lit with a constant brightness, a ratio among the illumination times of the LEDs 11R, 11G, and 11B is set, in consideration of the photosensitivity of the photographic paper 8 to each color, to, for example, LED 11B : LED 11G : LED 11R = 1:2:X, where X is in a range including 5 and 6. By illuminating the LEDs 11R, 11G, and 11B at such a ratio, red light, which is most prone to insufficient light quantity, can be supplemented, and good printing processing can be performed.

Please AMEND the paragraph beginning at page 36 line 16, as follows:

Incidentally, when illumination time is constant, the foregoing ratio may be a ratio of brightness of the respective LEDs. Accordingly, the number of LEDs is not limited to the 12 used in the present embodiment, and may be determined, within the limits of the space for installation, such that the product of LED brightness and illumination time for blue, green, and red fulfills the ratio 1:2:X, where X is in a range including 5 and 6.

Please AMEND the paragraph beginning at page 68 line 11, as follows:

When lit with a constant brightness, a ratio among the illumination times of the LEDs 61R, 61G, and 61B is set to, for example, LED 61B : LED 61G : LED 61R = 1:2:X, where X is in a range including 5 and 6. By illuminating the LEDs 61R, 61G, and 61B at such a ratio, red light, which is most prone to insufficient light quantity, can be supplemented, and overall good scanning can be performed.

Please AMEND the paragraph beginning at page 68 line 18, as follows:

Incidentally, when illumination time is constant, the foregoing ratio may be a ratio of brightness of the respective LEDs. Accordingly, the number of LEDs is not limited to the 12 used in the present embodiment, and may be determined, within the limits of the space for installation, such that the product of LED brightness and illumination time for blue, green, and red fulfills the ratio 1:2:X, where X is in a range including 5 and 6.

Please AMEND the paragraph beginning at page 100 line 13, as follows:

Incidentally, the numbers of LEDs provided in the LED groups 81 and 82 are not limited to those explained in the present embodiment, and may be determined, within the limits of the space for installation, such that the product of LED brightness and illumination time for red, green, and blue fulfills the ratio X:2:1, where X is in a range including 5 and 6.

REMARKS

This Preliminary Amendment is submitted to improve the form of the specification as originally-filed.

Also filed concurrently herewith is a Letter to the Examiner Requesting Approval of Changes to the Drawings. The identical changes were filed and approved in the parent application.

This Preliminary Amendment includes an attachment entitled "Version With Markings To Show Changes Made."

It is respectfully requested that this Preliminary Amendment be entered in the above-referenced application.

If there are any additional fees associated with filing of this Preliminary Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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By: John H. Stowe
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Registration No. 32,863

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Washington, D.C. 20001
(202) 434-1500

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

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When lit with a constant brightness, a ratio among the illumination times of the LEDs 11R, 11G, and 11B is set, in consideration of the photosensitivity of the photographic paper 8 to each color, to, for example, LED 11B : LED 11G : LED 11R = [1:2:5-6] 1:2:X, where X is in a range including 5 and 6. By illuminating the LEDs 11R, 11G, and 11B at such a ratio, red light, which is most prone to insufficient light quantity, can be supplemented, and good printing processing can be performed.

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Incidentally, the numbers of LEDs provided in the LED groups 81 and 82 are not limited to those explained in the present embodiment, and may be determined, within the limits of the space for installation, such that the product of LED brightness and illumination time for red, green, and blue fulfills the ratio [5-6:2:1] X:2:1, where X is in a range including 5 and 6.

ABSTRACT OF THE DISCLOSURE

A film scanner useful in a digital printing system. A first light source projects light onto film which holds an original image. A scanner registers an image corresponding to the original image by scanning light transmitted through the film. Insufficient light quantity caused by irregularities in the surface of the film is compensated. The compensation is preferably provided in a domain on a side of the film opposite the scanner. The compensation may be provided by a second light source having a plurality of light emitters having different respective spectral characteristics. Light quantity of the second light source is adjustable. Preferably the light emitters of the first light source have directivity in a plurality of directions intersecting with a light axis from the first light source to the scanner and the directivity of the light emitters is adjustable.

FIG.11(a)

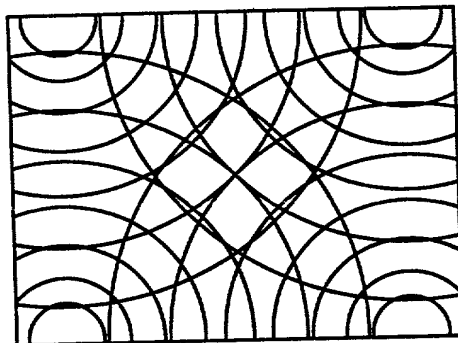


FIG.11(b)

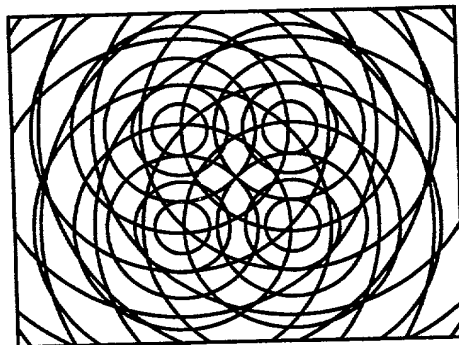


FIG.12 (a)

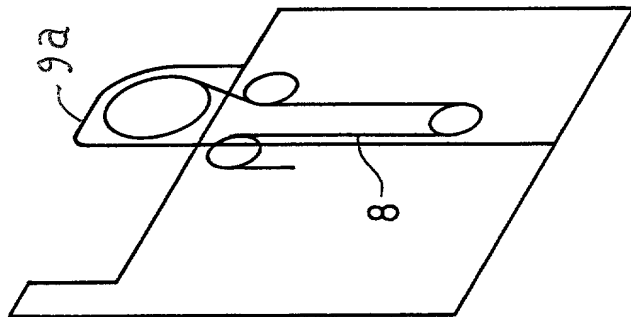


FIG.12 (b)

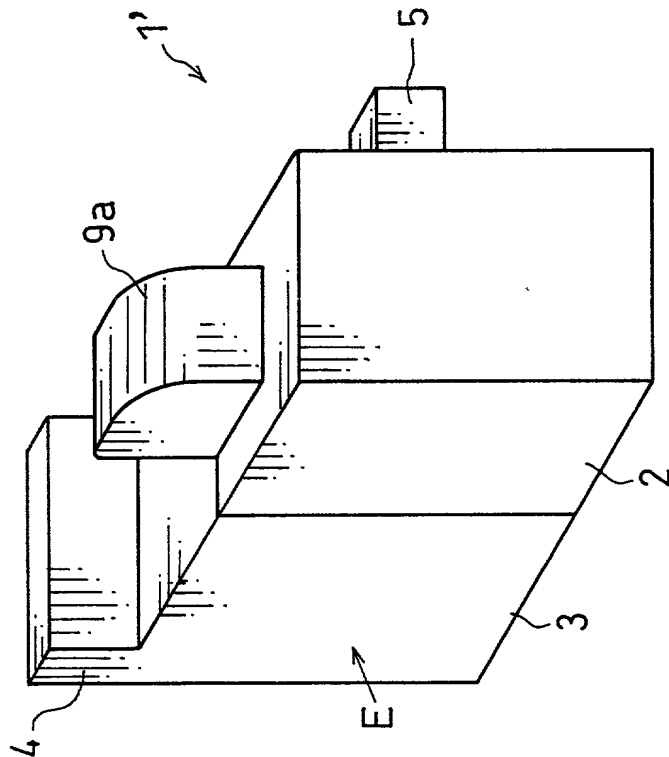


FIG. 33
(PRIOR ART)

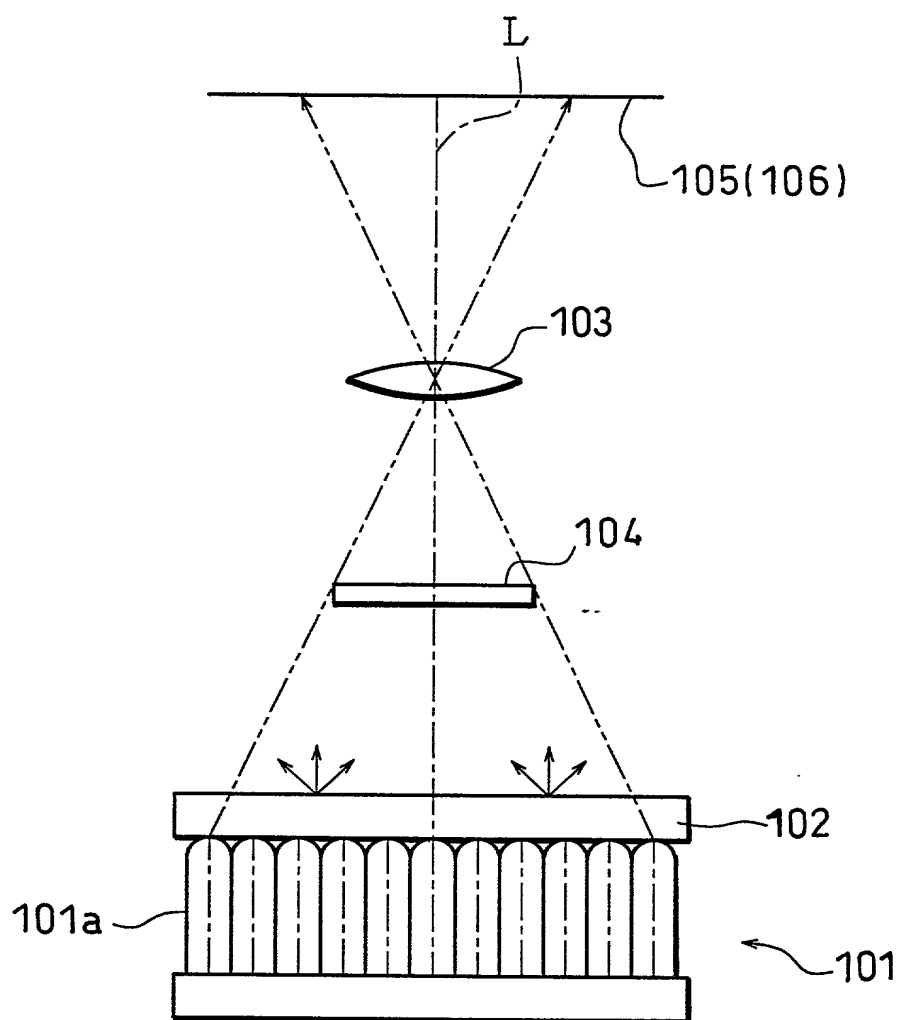
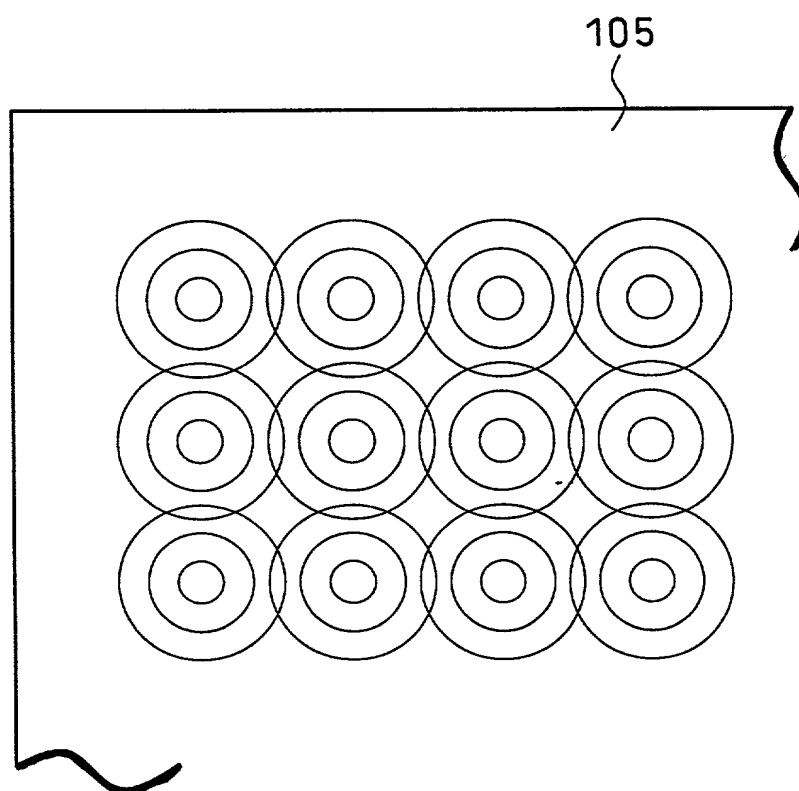


FIG. 34
(PRIOR ART)



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FIG. 11(a)

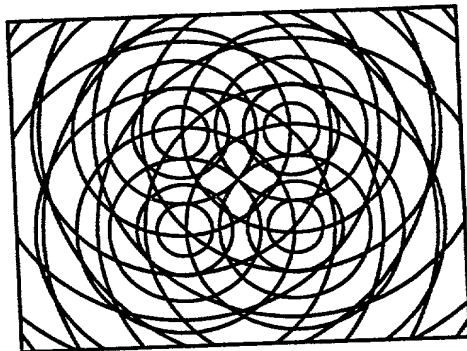


FIG. 11 (b)

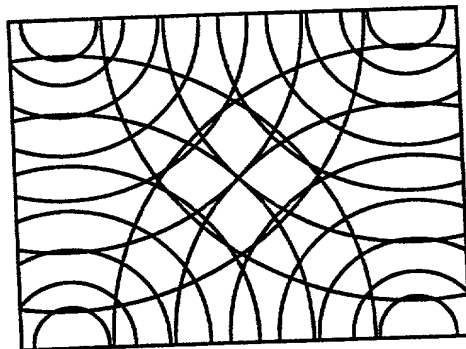


FIG.12(a)

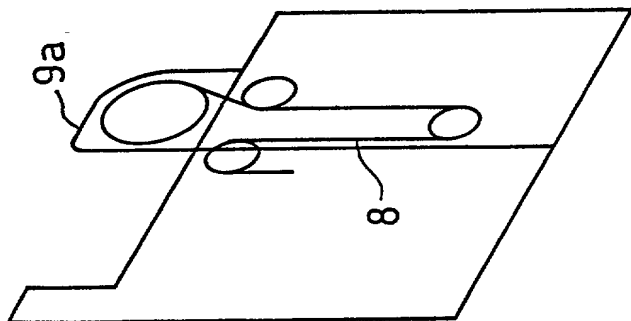


FIG.12(b)

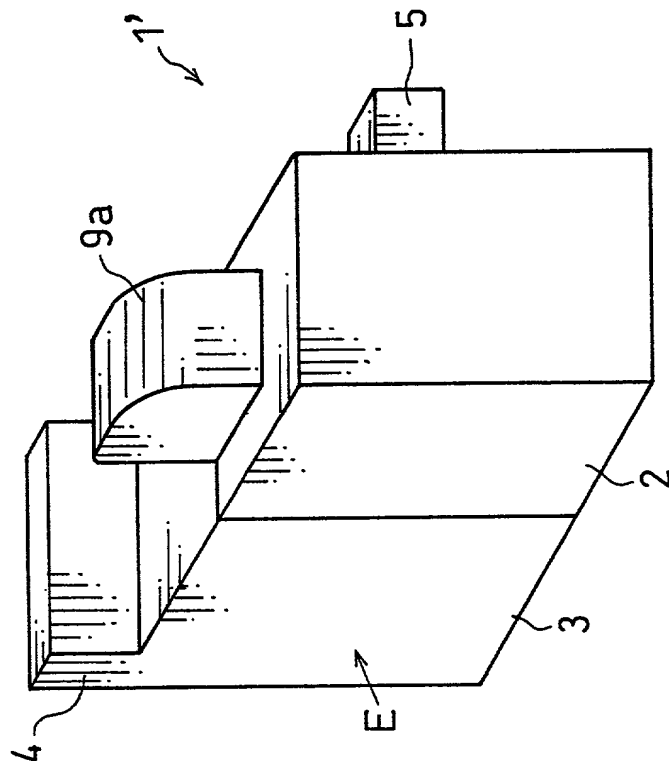


FIG. 34
(PRIOR ART)

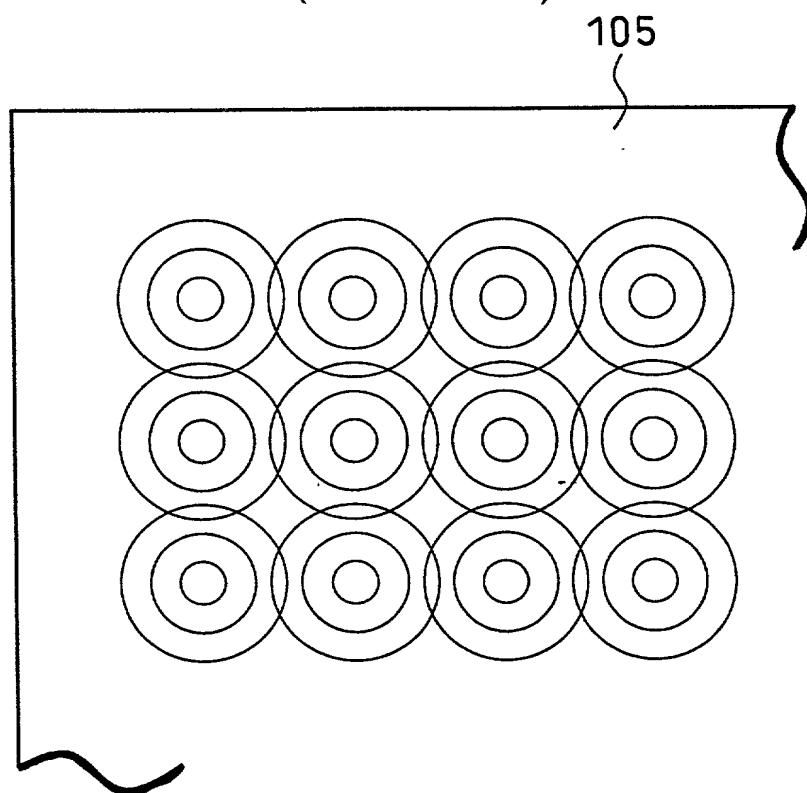


FIG. 33
(PRIOR ART)

